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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/653,339	09/02/2003	Carl R. Guckenberger	01539 (4828-70)	2949
26753	7590	01/13/2005	EXAMINER	
ANDRUS, SCEALES, STARKE & SAWALL, LLP 100 EAST WISCONSIN AVENUE, SUITE 1100 MILWAUKEE, WI 53202			GARBER, CHARLES D	
			ART UNIT	PAPER NUMBER
			2856	

DATE MAILED: 01/13/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/653,339

Applicant(s)

GUCKENBERGER ET AL.

Examiner

Charles D. Garber

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 02 September 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-30 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-30 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 02 September 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 112

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claim 26 is rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention. Claim recites "determining position of the cylinder upon receiving a first output signal from the electronic sensor". The sensor is described in preceding claim as sensor "to measure an output signal of the quantity meter as fluid is passed through the quantity meter". The position of the cylinder appears to be fixed according to the rest of the disclosure. Examiner considers one having ordinary skill would not be able to use such a sensor to determine a quantity of fluid based on the position of the cylinder without undue experimentation. For purposes of further examination on the merits the limitation regarding measurement of cylinder position will be ignored.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims*** are rejected under 35 U.S.C. 102(b) as being anticipated by Smith et al. (US Patent 3,631,709).

Regarding claims 1, 13, 21, 22 and 30, Smith discloses a high-speed calibration of liquid flow meters for calibrating volume or flow rate (title and background) including transverse members 10 with rubber bushings 14 which clamp and secure meter 8 (column 3 lines 26-30). Cylinder 26 and piston 28 are a variable positive displacement water chamber device in fluid communication with the meter for passing fluid through the meter (as shown in figure 1) wherein the water chamber device delivers a volume known in terms of specific flow rates and predetermined periods of time (column 2 lines 10-16).

Motor 34 is caused to operate at various controlled speeds to establish low, medium and high flow rates during test (column 3 line 70 to column 4 line 33) by circuit 73. Causing the motor to operate at the distinct speeds and consequent flow rates inherently requires a motor control device operatively coupled to the motor. The motor control is not numbered but its function is illustrated at the top of figure 4a in the box labelled "to motor control". The motor is shown in figure 1 operatively coupled to the cylinder and piston in such a way as to result in the motor control will control the displacement of the fluid from the cylinder 26 through the meter 8 as in the instant invention. Master flow counter 78 is a register device operable to selectively determine the amount of fluid dispensed from the water chamber and meter flow counters 82, 84 and 86 are electronic sensor devices for measuring an output signal from the meter 8, where each of the output signals from the quantity meter represent

a measurement of the meter. Figure 4b shows a calculation device coupled to the master flow counter and meter counters, wherein the calculation device is operable to use the test volume based on the master flow counter and a measured volume based on the output signals from the meter flow counters to compare the signals to determine if within an acceptable calibration range. (see column 5 line 58 to column 12 line 12)

As for claim 5, Smith disclosed a cylinder 26 and a piston 28 movable within the cylinder. The cylinder a known volume (see column 7 lines 16-26).

As for claim 6, as shown in figure 1, the speed controlled motor 34 is operatively coupled to the piston 28 (via items 32, 30) such that the motor moves the piston in the cylinder 26 to displace fluid from the cylinder.

As for claims 7, 17 and 25, figure 1 also shows motor 34 rotatably coupled to a lead screw 32, wherein the lead screw is coupled to the piston 28 via shaft 30 such that rotation of the lead screw moves the piston along the length of the cylinder to dispense fluid from the cylinder.

As for claims 8-10, 19 and 26, the master flow counter discussed above is operable to determine the position of piston within the cylinder, the rotation of the motor and the test volume (in terms of counts) as all three quantities are linearly related.

As for claims 12, 18 and 28, as shown in figure 1 valve 36 provides fluid inlet for receiving a supply of fluid from a municipal water supply and valve 38 provides for the supply of fluid being discharged from the cylinder and piston through the meter 8.

Claim Rejections - 35 USC § 103

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The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

Claims 2-4, 14-16, 23, 24 and 29 are rejected under 35 U.S.C. 103(a) as being unpatentable over Smith et al. (US Patent 3,361,709) in view of Ford (US Patent 2,635,454).

Smith lacks a slide plate, a clamp cylinder, and adapter operable as in the instant invention.

Ford discloses a meter testing machine with fittings 30 teaching plate-like base 34, 34', cylindrical housing 35, 35' and ends 56, 38 which are considered equivalent to a slide plate, a clamp cylinder, and adapter as in the instant invention. The base is movable toward and away from a water source at 33 such that the device is adjustable to secure different sized quantity meters. The housing is shown in figures 1 and 2 coupled to the base and the housing is operable to exert pressure to force to a meter 74 and into a fluid tight communication with the water source. The ends 56, 38 are shown

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receiving the meter 74, wherein each adapter forms a fluid tight seal with the meter through a threaded connection. The fittings 30 are mounted in a spaced relation on a trackway 12. The arrangement would allow meters of different length to be connected to the test device.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to include slide plate, a clamp cylinder, and adapter as in the instant invention so that the any number of meters may be connected in series during test.

Claims 11, 20 and 27 are rejected under 35 U.S.C. 103(a) as being unpatentable over Smith et al. (US Patent 3,361,709) in view of Waugh et al. (US Patent 4,372,147).

Smith does not expressly teach a single support device for securing the clamp device, the variable positive displacement water chamber device, the motor control device, and the electronic sensor device.

Waugh teaches flanges (shown clamping a fluid meter 100 in figures 1 and 2), a water displacement chamber generally within housing 12, hydraulic pump 76 or motor, and control box 88 which controls the pump or motor all supported by single housing on legs 14. The unitary arrangement permits in situ testing of the meter 100 while remaining in line.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to provide a single support device for securing the clamp device, the variable positive displacement water chamber device, the motor control device, and the electronic sensor device so that the flow meter prover may be

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"constructed and operated with a minimum of complexity" while the flow meter remains in-line.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

UK Patent Application GB 2 250 824 A includes several features in common with the instant invention principal of operation.

US Patent 3,877,287 teaches similar bench top support of most of the elements of the instant invention.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Charles D. Garber whose telephone number is (571) 272-2194. The examiner can normally be reached on 6:30 a.m. to 3:00 p.m..

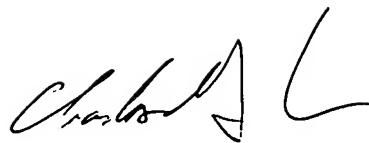
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Hezron Williams can be reached on (571) 272-2208. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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A handwritten signature in black ink, appearing to read "Charles Garber", followed by a large, stylized capital letter "L".

**CHARLES GARBER
PRIMARY EXAMINER**